Features

- IEEE 802.3 Ethernet compatible
- Compatible with 10/100/1000 BASE-T
- Discrete transformers and common mode chokes for flexible PCB layout
- Pairing common mode chip inductor Model SRF2012A-801Y for EMI reduction
- Expanded temperature range: -40 to +105 °C
- AEC-Q200 Compliant
- RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

Inductance (Pin 1-2 & 6-7 / short 3-4)
- 380 µH min. @ 100 kHz, 0.1 V, 0 mA
- 350 µH min. @ 100 kHz, 0.1 V, 8 mA

Turns Ratio
Pin 1-2 : 6-7 / short 3-4 : 1:1 ...... ± 3 %

Insertion Loss
- 1-100 MHz: -1.5 dB max.

Capacitance (Pin 3-5 / short 3-4)
- 35 pF typ.

Hi-Pot (Pin 1 to 6, short 3-4)
- 1500 V ac, 60 s

Withstanding Pulse Voltage
- 2400 V, 1.2/50 µS

Operating Temperature
- -40 °C to +105 °C

Storage Temperature
- -40 °C to +105 °C

Product Dimensions

Terminal Dimensions – Top View

How To Order

SM453229A - 381 - N7 Y

Model

Packaging
381 = Inductance code

Termination
N7 = Termination code

Tolerance
Y = Tolerance code

Additional Information

Click these links for more information:

PRODUCT
TECHNICAL
LIBRARY
INVENTORY
SAMPLES
CONTACT

<table>
<thead>
<tr>
<th>DIMENSIONS: MM</th>
<th>INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.70 ± 0.2</td>
<td>.185 ± .008</td>
</tr>
<tr>
<td>3.30 ± 0.2</td>
<td>.130 ± .008</td>
</tr>
<tr>
<td>2.9 ± 0.06</td>
<td>.114 MAX.</td>
</tr>
</tbody>
</table>

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Recommended Layout

Electrical Schematic
Top View

Solder Paste Stencil Aperture Recommendation

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Solder Reflow Recommendations

Profile Feature | Pb-Free Assembly
--- | ---
Preheat / Soak: Temperature Min. ($T_{\text{min}}$) | 150 °C
Temperature Max. ($T_{\text{max}}$) | 200 °C
Time ($t_s$) from ($T_{\text{min}}$ to $T_{\text{max}}$) | 60–120 seconds
Ramp Up Rate ($T_{\text{L}}$ to $T_p$) | 3 °C / second max.
Liquidous Temperature ($T_{\text{L}}$) | 217 °C
Time ($t_L$) maintained above $T_{\text{L}}$ | 60–150 seconds
Peak Package Body Temperature ($T_p$) | 250 °C
Time ($t_p$)* within 5 °C of the specified classification temperature ($T_c$) | < 30 seconds*
Ramp Down Rate ($T_p$ to $T_{\text{L}}$) | 6 °C / second max.
Time 25 °C to Peak Temperature | 8 minutes max.

*Tolerance for peak profile temperature ($T_p$) is defined as a supplier minimum and a user maximum.

Packaging Specifications

**Dimensions:**

- Diameter: 330 mm (12.992"
- Resin and Cover Tape: 12.5 ± 0.05 mm (.492 ± .020)
- Pin 1: 1.75 ± 0.10 mm (.069 ± .004)
- pins: 5.50 ± 0.05 mm (.217 ± .002)
- EMBOSSED CARRIER: 1.50 ± 0.10 mm (.059 ± .004)
- Diameter (DIA.): 1.50 ± 0.10 mm (.059 ± .004)
- Distance: 4.00 ± 0.10 mm (.157 ± .004)
- Distance (DIA.): 3.00 ± 0.10 mm (.118 ± .004)
- Distance: 8.00 ± 0.10 mm (.315 ± .004)
- Distance (DIA.): 3.60 ± 0.10 mm (.142 ± .004)
- Distance: 12.00 ± 0.10 mm (.472 ± .004)
- Distance (DIA.): 0.26 ± 0.05 mm (.010 ± .002)

**User Direction of Feed**

- QTY: 2000 PCS. PER REEL

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